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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,289

08/31/2006

Harald Hager

7601/88288

9193

66991

7590

01/04/2012

LAW OFFICE OF MICHAEL A. SANZO, LLC  
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EXAMINER

LEONARD, MICHAEL L

ART UNIT

PAPER NUMBER

1763

MAIL DATE

DELIVERY MODE

01/04/2012

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,289	<b>Applicant(s)</b> HAGER ET AL.	
	<b>Examiner</b> MICHAEL L. LEONARD	<b>Art Unit</b> 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 5) ☒ Claim(s) 61-80 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 61-80 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/12/2011</u> .                                              | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Examiner's Note***

The applicants' amended their claims to further limit the plastic to a "matrix of high transparency". This limitation has not been considered previously while searching the prior art or when applying 112 issues. Therefore, it is proper to make this action FINAL.

### ***Double Patenting***

The terminal disclaimer filed on 12/16/11 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 10/544,041 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 76-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Pub No. 2003/0130381 to Joachimi et al. in view of U.S. Patent Pub. No. 2005/0137305 to Carroll, JR et al. (Carroll)

As to claim 76, Joachimi discloses a method for producing a laser weldable, and laser markable (0008) transparent material that is produced by mixing (A) polymer and

(B) IR-absorbing compounds in an extruder – encompasses “high shear” (Abstract; paragraphs 28 and 118). Component (B) is present between 0.001 to 0.1 wt% and may comprise any IR-absorbing compounds (00028) however, there is no mention of the claimed metal-oxide compounds or 1 to 500 nanometer particles sizes.

Carroll discloses a laser-marking transparent plastic material that is produced by mixing (A) polymer and (B) IR-absorbing agents (Abstract, 0014, 0018). In particular, component (B) has a particle size of less than 100 nm and preferably consists of antimony-tin oxide (ATO) (0019). Carroll further discloses wherein the laser-marking additives will comprise 0.01 to 5% by weight of the resin (0018)

Therefore it would have been obvious include the ATO IR-absorbing particles of Carroll in the process for producing the laser weldable, laser-markable transparent material of Joachimi since they are disclosed as being preferred for analogous polymer systems containing IR-absorbing particles and it is prima facie obvious to add a known ingredient to a known composition for its known function. *In re Lindner* 173 USPQ 356; *In re Dial et al* 140 USPQ 244. Furthermore, Carroll discloses wherein the additives do not change the color or appearance of articles, including optical clarity, and retains the laser markability of the piece. Also, the polymers incorporating the additive material of this invention lasermark readily with lasers and the transparent polymers maintain initial optical clarity and do not look hazy upon incorporation and laser marking of the article formed therefrom (0014).

In view of this, it would have been obvious to one of ordinary skill in the art to optimize the amount of IR-absorbing material while maintaining acceptable IR absorption dependent upon the polymer employer including those within the scope of the present claims so as to produce desired end results.

As to claims 77-78, Carroll discloses suitable antimony-tin oxide particles useful as IR-absorbing materials in polymer systems (0014-0018).

Claim 79 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Pub No. 2003/0130381 to Joachimi et al. in view of U.S. Patent Pub. No. U.S. in view of U.S. Patent Pub. No. 2005/0137305 to Carroll, JR et al. (Carroll) and U.S. Patent No. 6,620,872 to Fisher.

As to claim 79, Carroll discloses antimony-tin oxide, patentee fails to explicitly mention blue indium-tin oxide. However, Fisher discloses the use of indium-tin oxides in analogous IR-absorbing technologies and given that there is a small, mutually-exclusive, mutually- exhaustive list consisting of the types of indium-tin oxide--yellow (stoichiometric) and blue (non-stoichiometric)--for one with ordinary skill in the art, it would have been obvious to try blue indium-tin oxide. Furthermore, it is prima facie obvious to add a known ingredient to a known composition for its known function. *In re Lindner* 173 USPQ 356; *In re Dial* et al 140 USPQ 244.

Claims 61-69, 71-75 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Pub No. 2003/0130381 to Joachimi et al. in view of U.S. Patent Pub. No. 2005/0137305 to Carroll, JR et al. (Carroll) and U.S. Patent Pub. No. 2004/0030384 to Wissman.

As to claim 61, as discussed above, Joachimi in view of Carroll render obvious a laser weldable material that is produced by mixing (A) polymers - such as polymethacrylates - and (B) light-absorbing IR-particles, however, Joachimi fails to teach a suitable method of laser welding said transparent material to various substrates.

Wissman also discloses laser-weldable material based on (A) polymer and (B) light- absorbing particles, wherein (A) comprises polymethacrylate polymers (Abstract; paragraph 10). In particular, Wissman teaches that the joining face of weldable material is exposed to laser light, then placed next to the join face of the other weldable material (Paragraph 11).

Therefore, it would have been obvious to utilize the laser welding methodology of Wissman for the composition of Joachimi et al since Wissman teach it is suitable for polymethacrylate base resins - the same as Joachimi et al.

As to claim 62, the plastic material is a molded part (Abstract of Wissman and Joachimi).

As to claim 63, Joachimi in view of Fisher render obvious (B) having a particle preferably between 10 and 30 nanometers - wherein (B) comprises between 0.001 to 0.1 wt% of (A) + (B) (Joachimi; paragraph 28; Fisher; col 3 lines 31).

As to claims 64-67, 72-75, and 80, Joachimi discloses wherein component (A) comprises polymethacrylate, polyamide, and/or bisphenol-A-polycarbonate (paragraph 33).

As to claims 68-69 and 71, Joachimi in view of Fisher render obvious component (B) having a particle preferably between 10 and 30 nanometers - wherein (B) comprises between 0.001 to 0.1 wt% of (A) + (B) (Joachimi, 0028; Fisher; col 3 lines 31).

Claim 70 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Pub No. 2003/0130381 to Joachimi et al. in view of U.S. Patent Pub. No. 2005/0137305 to Carroll, JR et al. (Carroll) and U.S. Patent Pub. No. 2004/0030384 to Wissman and U.S. Patent No. 6,620,872 to Fisher.

As to claim 79, Carroll discloses antimony-tin oxide, patentee fails to explicitly mention blue indium-tin oxide. However, Fisher discloses the use of indium-tin oxides in analogous IR-absorbing technologies and given that there is a small, mutually-exclusive, mutually- exhaustive list consisting of the types of indium-tin oxide--yellow (stoichiometric) and blue (non-stoichiometric)--for one with ordinary skill in the art, it would have been obvious to try blue indium-tin oxide. Furthermore, it is prima facie obvious to add a known ingredient to a known composition for its known function. *In re Lindner* 173 USPQ 356; *In re Dial* et al 140 USPQ 244.

***Response to Arguments***

Applicant's arguments with respect to claims 61-80 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **MICHAEL L. LEONARD** whose telephone number is (571)270-7450. The examiner can normally be reached on Mon-Fri 7:00-4:00.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MILTON I CANO/  
Supervisory Patent Examiner, Art Unit 1763

/MICHAEL L LEONARD/  
Examiner, Art Unit 1763